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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/751,420	01/06/2004	David Wei Hua Mou	MOUD3001/BEU	3198

23364 7590 12/29/2004

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EXAMINER	
HUNNINGS, TRAVIS R	

ART UNIT	PAPER NUMBER
2632	

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/751,420	MOU, DAVID WEI HUA	
	Examiner	Art Unit	
	Travis R Hunnings	2632	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24 and 26* is/are rejected.

7)☒ Claim(s) *25* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: the word "the" on page 6, line 16, should be deleted for clarity; "(Step 504)" should be inserted after the word "server" on page 12, line 19; "(Step 504)" on page 12, line 20, should be replaced with "(Step 505)"; on page 19, line 2, the reference number "530" should be replaced with "580".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 10, 12 and 14 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Gray (US Patent 4,990,896).

Regarding claim 10, Gray discloses *Light Responsive Device for Monitoring On-Line Indicator Lights* that has the following claimed subject matters:

The claimed at least one photosensor arranged to detect light emitted by the indicator light is met by the photovoltaic device (col2 10) used to monitor an on-line light of a system to be monitored (col1 56-68 and col2 1-4);

The claimed remote communications interface is met by the telephone link (col9 40-46).

Regarding claim 12, Gray discloses the following claimed subject matters:

The claimed sensor unit including multiple photosensors for monitoring multiple machine status indicator lights is met by the multiple lights and sensors as shown in figure 5 and column 9, lines 10-21.

Regarding claim 14, Gray discloses the following claimed subject matters:

The claimed photosensor being arranged to monitor an on/off condition of said indicator light is met by the device providing a signal at a remote location upon a change in the on/off status of an on-line light (col1 56-68 and col2 1-4).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-3, 7, 9, 11, 15, 16, 18, 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gray in view of Konsmo et al. (Konsmo; US Patent 5,844,808).

Regarding claim 1, Gray discloses the following claimed subject matters:

The claimed sensor unit including at least one photosensor arranged to detect light emitted by the indicator light is met by the photovoltaic device (col2 10) used to monitor an on-line light of a system to be monitored (col1 56-68 and col2 1-4);

The claimed remote communications interface is met by the telephone link (col9 40-46);

The claimed computing device arranged to interpret said signals in order to indicate a status of said machine is met by the controller scanning inputs from the sensors and using that information to generate alarms (col9 10-21).

However, Gray is silent on the claimed receiver remotely situated relative to said sensor unit and arranged to receive signals generated by said sensor in response to detection of light emitted by said indicator light. Konsmo discloses *Apparatus and Methods for Monitoring and Communicating With a Plurality of Networked Remote Vending Machines* that teaches a central host computer that can receive messages from remotely monitored devices (col6 26-30). Modifying the device of Gray to use a central computer system instead of the telephone link would allow for easier operation by letting the host computer handle the messages instead of having a human always around to answer the telephone. Therefore it would have been obvious to one of

ordinary skill in the art at the time of the invention to modify the device disclosed by Gray according to the teachings of Konsmo to include a central host computer instead of a telephone link.

Regarding claim 2, Gray discloses all the claimed limitations except for the claimed remote communications interface including a wireless transmitter and said receiver is a wireless receiver. Konsmo teaches using a wireless communications network to accomplish the two-way communication between the monitored devices and the central host computer (col3 26-32). The examiner takes official notice that it is well known to one of ordinary skill in the art to include a wireless transmitter in the monitored device and a receiver in the central host computer in order to accomplish the wireless network as taught by Konsmo. It would be beneficial to use a wireless network in the device of Gray in order to save money on wiring the devices together, it would also allow for greater separation distance of the devices. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by Gray according to the teachings of Konsmo to set up the remote communications interface to use a wireless transmitter in the monitored device and a wireless receiver in the receiver.

Regarding claim 3, Gray discloses all the claimed limitations except for the claimed receiver being arranged to receive signals from a plurality of said sensor units, each identifiable by a unique identifier. Konsmo teaches a system that monitors

multiple remote devices (col3 26-32) wherein each remote device has an identification number (col11 40-44). Altering the device of Gray to monitor multiple remote devices would increase the flexibility of the system and providing each remote device with a unique identifier number would allow for quicker determination of the location of an alert. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by Gray according to the teachings of Konsmo to monitor multiple remote devices, each with a unique identifier.

Regarding claim 7, Gray and Konsmo disclose all the claimed limitations. The claimed sensor unit including multiple photosensors for monitoring multiple machine status indicator lights is met by the multiple lights and sensors as shown in figure 5 and column 9, lines 10-21.

Regarding claim 9, Gray and Konsmo disclose all the claimed limitations. The claimed photosensor being arranged to monitor an on/off condition of said indicator light is met by the device providing a signal at a remote location upon a change in the on/off status of an on-line light (col1 56-68 and col2 1-4).

Regarding claim 11, the claim is interpreted and rejected as claim 2 stated above.

Regarding claim 15, the claim is interpreted and rejected as claim 1 stated above.

Regarding claim 16, the claim is interpreted and rejected as claim 2 stated above.

Regarding claim 18, the claim is interpreted and rejected as claim 3 stated above.

Regarding claim 19, the claim is interpreted and rejected as claim 7 stated above.

Regarding claim 21, the claim is interpreted and rejected as claim 9 stated above.

6. Claims 4-6 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gray in view of Konsmo and further in view of Motoyama et al. (Motoyama; US Patent 6,631,247).

Regarding claim 4, Gray and Konsmo disclose all the claimed limitations except for the claimed receiver being connected to a network server. Motoyama discloses *Method and System for Remote Diagnostic, Control and Information Collection Based*

on Various Communication Modes for Sending Messages to a Resource Manager that teaches a remote monitoring station that monitors multiple devices and is connected to a local area network (fig. 1, 16) to accomplish the communications (col5 4-26). It is inherent that a network must have a server that runs the network, and therefore by connecting a computer to a network it is operably connected to the network server. Connecting the central host computer of Gray and Konsmo to a network would facilitate communications by using an already existing protocol that is present in the network. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by Gray and Konsmo according to the teachings of Motoyama to connect the central host computer to a network.

Regarding claim 5, Gray, Konsmo and Motoyama disclose all the claimed limitations. The claimed server being connected to a local area network is met by the network of Motoyama being a Local Area Network (col5 4-26).

Regarding claim 6, Gray and Konsmo disclose all the claimed limitations except for the claimed server being connected to the internet. Motoyama teaches connecting the network to the internet to accomplish the communication between monitored device and central monitoring station. By modifying the device of Gray and Konsmo to connect the network server to the internet so that it would communicate over the internet, the method of communication would be made more simple by using the pre-existing format of communication across the internet. Therefore it would have been obvious to one of

ordinary skill in the art at the time of the invention to modify the device disclosed by Gray and Konsmo according to the teachings of Motoyama to connect the network server to the internet.

Regarding claim 17, the claim is interpreted and rejected as claim 6 stated above.

7. Claims 8 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gray in view of Konsmo and further in view of Extance et al. (Extance; US Patent 4,774,494).

Regarding claim 8, Gray and Konsmo disclose all the claimed limitations except for the claimed photosensor being arranged to monitor a color of said indicator light. Extance discloses *Position Encoder Employing Three or More Colors* that teaches a color sensitive light detector that can produce different output signals based on the color that is sensed (col1 52-61). Using the improved detector disclosed by Extance in the system of Gray and Konsmo would allow for more situations to be detected on remotely monitored machines that have lights of multiple colors. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by Gray and Konsmo according to the teachings of Extance to use a photosensor that can discriminate the color of the indicator light.

Regarding claim 20, the claim is interpreted and rejected as claim 8 stated above.

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gray in view of Extance.

Regarding claim 13, Gray discloses all the claimed limitations except for the claimed photosensor being arranged to monitor a color of said indicator light. Extance teaches a color sensitive light detector that can produce different output signals based on the color that is sensed (col1 52-61). Using the improved detector disclosed by Extance in the system of Gray would allow for more situations to be detected on remotely monitored machines that have lights of multiple colors. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by Gray according to the teachings of Extance to use a photosensor that can discriminate the color of the indicator light.

9. Claims 22, 23 and 26 rejected under 35 U.S.C. 103(a) as being unpatentable over Ferguson et al. (Ferguson; US Patent 6,654,673) in view of Gray.

Regarding claim 22, Ferguson discloses *System and Method for Remotely Monitoring the Condition of Machine* that has the following claimed subject matters:

The claimed means for definitions from a database and comparing the received data with the definitions is met by the prognostic engine (col5 30-44) comparing the remote data with data stored in a parameter system (col5 59-62);

The claimed means for displaying a result of said comparison is met by the display (col5 12-16).

However Ferguson is silent on the claimed means for receiving data indicative of the status of at least one indicator light on at least one machine. Gray teaches using a photosensor to detect the changing conditions of an on-line light on a remote machine (col1 56-68 and col2 1-4). Altering the device of Ferguson to monitor a light on the remote machines that it monitors would allow the device to monitor additional parameters of the machine and it would be a cheap and easy retro-fit solution to pre-existing machine systems. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by Ferguson according to the teachings of Gray to monitor the status of a light on the monitored machine.

Regarding claim 23, Ferguson and Gray disclose all the claimed limitations. The claimed means for storing results of said comparison and later displaying said stored results as historical data is met by the fault code and variance information being stored in the variance database when the comparison indicates a fault condition (col7 55-63, col6 3-6 and 24-30).

Regarding claim 26, Ferguson and Gray disclose all the claimed limitations. The claimed means for providing a warning to a user upon detection of an alert status of said indicator light is met by the remote system providing immediate notification to the owner or other person upon the receipt of a fault condition (col7 55-63).

10. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ferguson in view of Gray and further in view of Schnackenberg et al. (Schnackenberg; US Patent 6,172,432).

Regarding claim 24, Ferguson and Gray disclose all the claimed limitations except for the claimed means for calculating a run time based on said data and for comparing said run time with a maintenance schedule in order to generate maintenance reminders. Schnackenberg discloses *Automatic Transfer Switch* that teaches a generator being monitored by a separate controller that can be configured to monitor the running time of the machine and provide an alarm to an operator that maintenance is required after a predetermined time period has passes since the last maintenance was performed (col3 50-54). It would be beneficial to the device of Ferguson and Gray to modify the controller to monitor maintenance schedules and provide an alarm when maintenance is requires so that the remote machines are kept up well. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by Ferguson and Gray according to the teachings of Schnackenberg to make the controller monitor for maintenance reminders.

Allowable Subject Matter

11. Claim 25 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kuwabara, *System for Remote Diagnosis of Device...* US Patent 6,065,136

Canada et al. *Machine Monitoring with Status...* US Patent 6,297,742

Hilleary, *Method and Apparatus for Light Outage...* US Patent 6,222,446

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Travis R Hunnings whose telephone number is (571) 272-3118. The examiner can normally be reached on 8:00 am - 5:00 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel J Wu can be reached on (571) 272-2964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TRH

DANIEL WU
SUPERVISORY PATENT EXAMINER
12/26/04